UNITED STATES ADVANCED BATTERY

CONSORTIUM PROGRESS REPORT

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The United States Advanced Battery Consortium was formed in 1991 as a partnership of the domestic automakers to conduct research and development of advanced batteries for electric vehicles. Since 1991, the USABC has conducted research and development on a number of advanced batteries under a cooperative agreement with the U. S. Department of Energy. Under this agreement, the Department paid 50 percent of the consortium's research and development costs. To date, the USABC has spent nearly $ 200 million in advanced battery research and development programs.

The USABC has brought the nickel metal hydride technology to the point were it believes the mid-term technical goals can be achieved. The formation of the General Motors-Ovonic joint venture is the first step in the creation of a domestic advanced battery industry that is needed for the United States to remain competitive in the 21st century.

At the same time, USABC has realized that the long term goals developed in 1991 were not likely to be realized within this decade. However, the industry's electric vehicle platform programs have agreed that commercializing the long term technologies at levels corresponding to about 150 wh/kg and 300 w/kg would be desirable from a business viewpoint. Hence, the USABC has developed a new set of criteria for "interim commercialization" of the long term technologies.

USABC has also focused its program, with fewer developers working on each technical areas. In Phase II, work is continuing with the General Motors-Ovonic joint venture and SAFT to reduce the cost of their respective nickel metal hydride technologies. Work is also continuing with the Duracell/ VARTA team on lithium ion batteries and with the 3M/Hydro-Quebec team on lithium polymer batteries. The recently announced new cooperative agreement with the Department of Energy assure continued support for the USABC program.

Where the capabilities to build full vehicle batteries exist for a given technology, USABC will emphasize in-vehicle testing. USABC is still improving its processes for in-vehicle testing, and is contemplating working more closely with the Society of Automotive Engineers in developing industry wide standards for in-vehicle testing. USABC will also emphasize safety testing of cells and modules and cooperate with SAE on standards development.